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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,045	12/29/2003	Ga-Lane Chen		7405

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EXAMINER

VARGOT, MATHIEU D

ART UNIT	PAPER NUMBER
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1732

MAIL DATE	DELIVERY MODE
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07/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/749,045

Applicant(s)

CHEN ET AL.

Examiner

Mathieu D. Vargot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Upon reconsideration and the discovery of a new reference, prosecution has been re-opened.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has disclosed that the cavity is "papilionaceous" in cross-section, yet it is unclear exactly what this entails. The term is generally used to describe petals on a flower or a structure that looks like a flower. It is not clear from the instant specification exactly what this cavity structure would look like. Does applicant mean that the concavities produce microlenses-- like that shown as 31 in instant Fig. 3—that constitute petal like structures? Clarification is required—no new matter may be introduced into the specification.

3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 13, "injecting" is misspelled. Also, applicant has used the term "papilionaceous" in claims 1 and 10 as describing the cavity cross-section and it is not clear exactly what this means. Is the cavity shaped like a flower or petals of a flower or

are the lenses formed on the lightguide plate the petals? Clarification is required as to how the cavity is of a "papilionaceous shape in cross-section".

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuda et al (see Fig. 1).

Matsuda et al discloses the instant mold with first (1) and second plates (2) having side walls as set forth in the instant claims. See Figure 1 therein. While the applied reference does not explicitly teach that the mold is used "for producing a light guide plate", it is submitted that such constitutes an intended use of which the prior art is inherently capable of performing. Clearly, the product produced looks like a conventional, double wedge light guide plate.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al, which discloses the basic claimed mold lacking essentially that the cavity would be "papilionaceous" in cross-sectional shape. It is submitted that the instant shape

constitutes a mere matter of final article desired and would have been obvious in Matsuda et al to make a "papilionaceous" shaped article.

6. Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al in view of Nishigaki (see col. 7, lines 13-31 and col. 6, lines 50-64). Matsuda et al discloses the basic claimed mold as set forth in paragraph 4, supra, the primary reference essentially lacking the aspects of the mold materials and engraved patterns. Nishigaki teaches these aspects in molding a light guide plate—see col. 7, lines 13-31 for the materials and col. 6, lines 50-64 for the pattern. It is submitted that these aspects are quite conventional in the light guide plate making art and would have been obvious modifications to the mold of the primary reference to in fact form a desired light guide plate. Method claim 20 is submitted to have been obvious from the combination. Clearly, wedge shaped light guide plates are known, and the mold of Matsuda et al surely would have utility in forming a double wedge light guide plate, these being well known in the art.

7. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al in view of Nishigaki (see also the abstract; col. 5, line 7; col. 11, line 12) and Choi (see col. 7, lines 38-41). Matsuda et al and Nishigaki are applied primarily for reasons of record as set forth in the paragraphs, supra, the reference to Nishigaki also teaching the instant viscosity of the resin, the resin and resin molding temperatures. Essentially, Matsuda et al and Nishigaki fail to disclose the instant injection rate. Choi has been additionally applied to teach the instant injection rate into the mold, given that the thickness of the plate is .03-

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.2 cm thick. Ie, an injection rate of 10,000 cm sq/sec, when multiplied by the thickness of the molded plate, gives a volumetric flow rate within the instant range. It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the method of Matsuda et al as taught by Nishigaki and Choi to facilitate the formation of the light guide plate from a desired resin. It is further submitted that the instant viscosities and flow rates would have been readily determined through routine experimentation and hence would have been obvious parameters within the teachings of the references.

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant indicated that Nishigaki was lacking as a primary reference to disclose the instant invention. Upon discussing the case, such was agreed with and hence prosecution has been reopened. Needless to say, Matsuda et al constitutes a far better reference against the claims. The newly found reference anticipates instant claims 10-12 and renders the remainder of the claims obvious as generally set forth supra. Also, note column 1, lines 31-34, wherein Matsuda et al teaches that the prior art injection molding of articles with a non-uniform thickness resulted in articles molded with residual "stress-strain". Hence, it would appear that the reference is disclosing a mold and method that eliminates such an occurrence. Not surprisingly, applicant has also indicated that the instant arrangement eliminates strain in the molded product. Hence, the advantages over the prior art noted by applicant would appear to be taught in Matsuda et al.


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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mathieu D. Vargot whose telephone number is 571 272-1211. The examiner can normally be reached on Mon-Fri from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson, can be reached on 571 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Vargot
June 25, 2007


Mathieu D. Vargot
Primary Examiner
Art Unit 1732

6/25/07